

# DENTAL EDUCATION

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## Effectiveness of piper betel leaf extract against the growth of *Staphylococcus aureus* (*in vitro*)

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Infection of the oral cavity is an infection caused by the activity of pathological microorganisms such as *Staphylococcus aureus* bacteria. The use of herbal ingredients such as betel leaf extract, in the assumption, can be useful for inhibiting the growth of *Staphylococcus aureus* in the infection. This study aims to determine the effectiveness of antibacterial piper betel leaf extract 25% against the growth of *Staphylococcus aureus*. This research used posttest only control group design, composed of 27 samples of *Staphylococcus aureus* type A bacteria which were divided into 3 treatment groups, consists of : group I treated with 25% betel leaf extract, group II treated with lemongrass extract 25% and control group treated with Amoxicillin 500 mg. Result obtained by means parametric statistic test, that is one way-ANOVA, obtained p value 0.001 ( $p < 0.05$ ), so there is a significant difference in the inhibition zone of the three groups. Result of Post Hoc Test, that is Least Significant Difference (LSD) obtained p value 0.001 ( $p < 0.05$ ), there is significant difference in the measurement of inhibition zone between groups. Piper betel leaf extract is 25% more effective than lemongrass extract 25% and amoxicillin 500 mg against the growth of *Staphylococcus aureus*.

### Biography

Tri Purnami Dewi R has completed her DDS degree in the year 1997 from Faculty of Dentistry, Hasanuddin University and Post-graduation in Health Sciences from Gadjah Mada University in 2004. She is currently pursuing a Doctoral Program of Medical Science at Faculty of Medicine Udayana University.

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